

[54] **COMMUNICATION TERMINAL FOR PROCESSING VOICE AND GRAPHICAL INFORMATION**

[75] Inventor: Manfred Laube, Keltern, Fed. Rep. of Germany

[73] Assignee: International Standard Electric Corporation, New York, N.Y.

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[56] **References Cited**

U.S. PATENT DOCUMENTS

3,617,630 11/1971 Reiffel 178/19
3,732,557 5/1973 Evans et al. 179/2 DP X
3,801,740 4/1974 Buzzard et al. 179/2 TV X
3,912,860 10/1975 Sasabe et al. 179/2 DP X
4,431,870 2/1984 May et al. 179/90 B
4,456,787 6/1984 Schlosser et al. 178/19

FOREIGN PATENT DOCUMENTS

2131316 7/1973 Fed. Rep. of Germany ... 179/2 TV
2433667 1/1976 Fed. Rep. of Germany .

OTHER PUBLICATIONS

C. C. Cutler, "Displayphone: An Interactive Communication Experiment", Conference; Electronic Text Communication, Munich, Germany, Jun. 1978, pp. 323-329. Musashino Electrical Communication Laboratory Nippon Telegraph and Telephone Public Corporation, "Telewriting Terminal 'Sketchphone'", © 1983. Blueden et al, "Touchphone: A New Generation of Telephone Design", *Telesis*, 1985, No. 2, pp. 20-25.

Primary Examiner—Keith E. George

Attorney, Agent, or Firm—T. L. Peterson; J. S. Christopher

[57] **ABSTRACT**

A communication terminal for processing voice and graphical information having a telephone set including a handset supported by a housing with an input device mounted within the housing for establishing communication with a distant terminal. The input device includes a flat display screen having a presentation portion and a switching field portion. A transparent resistive coating which conducts electrical signals and which is mounted over the presentation portion is manually contacted by a pen which extracts a signal for identifying the point of contact. The pen is used to touch the portion of the screen representing a dial keypad and various switching functions. The extracted signals are digitized and transmitted to distant terminals via a control circuit which processes both voice and graphical information.

10 Claims, 5 Drawing Figures

